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REMARKS

Reconsideration of the pending application is respectfully requested. Claims 1-21 remain pending in the present application.

Rejection of Claims 1-19 under 35 U.S.C. 103(a)

The Examiner has rejected Claims 1-19 under 35 U.S.C. 103(a) as being unpatentable over EP Reference (232,856) in view of Narin (U.S. Pat. 5,292,020). The Examiner suggests that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of the EP '856 Reference by making the threads on the closure to become gradually larger and maintain a constant thread ridge on the container since this is just a reversal of the essential working parts. The Examiner further states that Narin teaches an anti-back off bead located above the threads and a disc seal located above the anti-back off bead. Examiner then suggests that it would be obvious to combine these teachings in Narin with the modified EP '856 Reference.

Applicant's Attorney respectfully traverses the Examiner on this ground of rejection. Neither reference teaches the novel thread design claimed herein having a flat upper thread surface in combination with threads that taper into a sidewall of a closure.

The Examiner suggests that EP '856 teaches a tapered thread depth. However, EP '856 teaches a tapered thread width (space between adjacent threads), which is not equivalent to a tapered thread depth as presently claimed herein.

The male screw 4 is formed as such that the widths A_1 , A_2 of the screw grooves become gradually smaller as it goes toward the terminal end direction of the screw ($A_1 > A_2$)... Since the male screw 4 is formed as such that the configuration of the thread ridge is constant but, as described in the foregoing, the width of the

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screw groove becomes gradually smaller as it goes toward the terminal end direction of the screw. EP '856, pg. 7.

As can be seen in EP '856 Fig. 7, the width referred to in the reference, A_1 and A_2 , is in a vertical direction. The tapered depth as claimed in this application is in a horizontal direction which is in contrast with the constant ridge in EP '856. Therefore, EP '856 does not teach a tapered horizontal thread depth as claimed herein.

None of the references relied on by the Examiner teach a flat upper thread surface. The reason the prior art has taught a tapered upper thread surface is to simplify production. The production is less difficult because the closure can be pushed off a mold core, it does not need to be unscrewed.

However, the flat upper thread surface claimed herein has several advantages over the prior art. The first advantage of having a flat upper thread surface is that the thread surface will withstand a higher torque thus increasing friction between the container and closure threads which improves non-back-off capabilities. The second advantage is that better thread definition can be obtained, thus the threads are less likely to strip. The third advantage is that since the helical thread stops short of the inside top wall, a seal can be snapped into place between the bead and the top wall thus eliminating the need for use of glue which reduces production costs. Finally, the seal between the top wall and container may be a linerless seal since a sufficient torque can be applied to produce a seal without stripping the threads. This too reduces production costs.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to

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combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure. In re Vaeck, 947 F.2d 488, 20USPQ2d 1438 (Fed. Cir. 1991); MPEP 2142. As the Examiner is aware, the mere fact that a reference can be modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. Additionally, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. MPEP 2142.

Upon review of the Narin and EP '856 references, it is apparent that there is no suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references, nor do the references teach or suggest all of the claim limitations. Additionally, it appears that the Examiner has engaged in hindsight reasoning to reach the desired legal conclusion since there is no suggestion alone or in combination in the prior art to combine these references.

The references relied upon by the Examiner do not teach the improved thread design claimed herein. Narin and EP '856 teach a jumped thread having a tapered or slanted upper thread design that can be pushed off a core mold which is in direct contrast to the presently claimed closure having a substantially flat upper thread. Narin teaches a jump thread and the addition of a protuberance to control the back-off tendency of the closure. Narin does not teach a tapered horizontal thread depth as presently claimed herein. The EP '856 reference teaches a

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container having a decreasing thread width toward the upper part of the container, not a tapered horizontal thread depth as claimed herein.

The Narin and EP '856 references distinctly teach away from the claimed invention and follow the prior art in having a tapered upper thread surface for ease of production, which is in direct contrast with the substantially flat upper thread surface claimed herein. Additionally, neither reference claims the tapered thread depth as presently claimed. Therefore, the references individually or combined, in no way suggest or teach the presently claimed closure having a flat upper thread surface and a horizontally tapered thread depth. Applicant's Attorney therefore respectfully requests the Examiner remove said rejection.

Rejection of Claims 9, 12-13, 16 and 18 under 35 U.S.C. 103(a)

These claims were rejected under 35 U.S.C. 103(a) in view of the combination of Narin and EP '856. The Examiner suggests that having a first depth of .0475 inches and a second depth of .01 inches and the arc length of 90 degrees would be obvious to one having ordinary skill in the art. Applicant's Attorney respectfully traverses the Examiner under this ground of rejection. Each of the Claims herein has the limitations of a tapered thread depth having a flat upper thread surface and a lower thread portion of a first horizontal depth and an upper thread portion of a second horizontal depth, the first horizontal depth being greater than the second horizontal depth. Thus, the taper claimed herein is in a horizontal direction while the EP '856 teaches a vertically tapered thread. Since neither the Narin or the EP '856 reference teach a horizontally tapered thread or a flat upper thread surface, the combination of the two references do not teach this combination as claimed herein. Even if the specific depths as claimed would be obvious to one having ordinary skill in the art, which is not being agreed to here, the references

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relied on by the Examiner do not teach the novelty of the presently claimed thread design of having a flat upper thread surface in combination with a horizontally tapered thread. Applicant's Attorney respectfully requests this ground of rejection be withdrawn.

Rejection of Claims 1-21 under 35 U.S.C. 103(a)

The Examiner has rejected Claims 1-21 under 35 U.S.C. 103(a) as being unpatentable over the Swiss Reference (597,052) in view of the EP Reference (232,856). Applicant's Attorney respectfully traverses the Examiner under this ground of rejection. All of the Claims in this application have the limitations of a tapered thread depth having a flat upper thread surface. Even if the Swiss Reference (597,052) teaches a horizontally tapered thread, as the Examiner has suggested, neither the EP '856 reference or the Swiss Reference (597,052) teach a flat upper thread surface. Therefore, the combination of the two references do not teach a horizontally tapered thread in combination with a flat upper thread surface as presently claimed. Therefore, Applicant's Attorney respectfully requests this ground of rejection be withdrawn.

Rejection of Claim 20 under 35 U.S.C. 112

Claim 20 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Claim 20 has been amended to resolve this rejection.

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Conclusion

Applicant's Attorney asserts that the instant application is in condition for allowance. Applicant's Attorney therefore respectfully requests that the Examiner allow the pending claims as currently presented. However, if the Examiner believes there are other unresolved issues in this case, Applicant's Attorney of record would appreciate a call at (502) 584-1135.

Respectfully submitted,

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